Claims

1. An audio signal processing apparatus for processing an audio signal outputted from receiving means which is provided for receiving a signal transmitted hereto through a digital transmission route, said apparatus comprising:

audio processing means for processing said audio signal; and

control means for judging a reception state using a plurality of information indicating an internal state of said receiving means, and controlling signal processing contents to be executed by the audio processing means in accordance with a result of said judging.

2. The audio signal processing apparatus according to claim 1, wherein the audio processing means individually performs a signal processing on said audio signal in each channel.

3. The audio signal processing apparatus according to claim 1 or 2, wherein the control means judges a reception state using a bit error rate and an AGC voltage of said receiving means.

4. The audio signal processing apparatus according to claim 3, wherein when the control means has judged from said bit error rate that a reception state is not acceptable, said control means judges from a value of said AGC voltage whether a reception electric field is a weak electric field, thereby judging a reception state.

5. The audio signal processing apparatus according to claim 4,

wherein when the control means has judged from a value of said AGC voltage that a reception electric field is not a weak electric field, said control means judges a reception state from a changing amount of said AGC voltage.

6. The audio signal processing apparatus according to claim 5, wherein when a changing amount of the AGC voltage is smaller than a predetermined value, the control means judges that a reception field has been stabilized, and controls said signal processing contents in response to a result of said judging.

7. The audio signal processing apparatus according to claim 5 or 6, wherein when a changing amount of the AGC voltage is larger than a predetermined value, the control means judges that there is not an influence from a multi-pass, and controls said signal processing contents in response to a result of said judging.

8. The audio signal processing apparatus according to any one of claims 4 to 7, wherein when the control means has judged from a value of said AGC voltage that a reception electric field is a weak electric field, said control means judges a reception state from a changing amount of C/N value of the receiving means.

9. The audio signal processing apparatus according to claim 8, wherein when a changing amount of C/N value is smaller than a predetermined value, the control means judges that a reception electric field is a weak electric field, and controls the signal

processing contents in response to a result of said judging.

10. The audio signal processing apparatus according to claim 8 or 9, wherein when a changing amount of C/N value is larger than a predetermined value, the control means judges that there is not an influence from a multi-pass, and controls the signal processing contents in response to a result of said judging.

11. The audio signal processing apparatus according to any one of claims 1, 2, 4, 5, 6, 8, and 9, wherein said control means controls the signal processing contents in response to said reception state and a change of an amount of an audio signal outputted from said receiving means.

12. The audio signal processing apparatus according to claim 11, wherein information in relation to a change of said audio signal includes an aggravation period in which an audio signal amount is lower than a threshold and an aggravation interval which is an interval of the aggravation period.

13. An audio signal processing method for processing an audio signal outputted from receiving means which is provided for receiving a signal transmitted hereto through a digital transmission route, said method comprising:

a reception state judging step for judging a reception state using a plurality of information indicating internal state of said receiving means;

a processing contents setting step for setting processing contents of said audio signal in accordance with a judgment result based on said reception state judging step; and

a signal processing step for processing said audio signal in accordance with said processing contents set by said processing contents setting step.

14. A computer program for a computer to execute, which computer is provided for processing an audio signal outputted from receiving means provided for receiving a signal transmitted hereto through a digital transmission route, said program comprising:

a reception state judging step for judging a reception state using a plurality of information indicating internal state of said receiving means;

a processing contents setting step for setting processing contents of said audio signal in accordance with a judgment result based on said reception state judging step; and

a signal processing step for processing said audio signal in accordance with said processing contents set by said processing contents setting step.

15. A recording medium having recorded therein a computer program recited in claim 14.